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AN ACCOUNT OF THE
LIFE AND WORKS
OF
DR. ROBERT WATT.

BY

JAMES FINLAYSON, M.D.

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DR ROBERT WATT



Photographed by ALFRED E. SMITH, Glasgow.

Robt. W. M. D.



AN ACCOUNT OF THE
LIFE AND WORKS
OF
DR ROBERT WATT

AUTHOR OF THE 'BIBLIOTHECA BRITANNICA'

BY

JAMES FINLAYSON, M.D.

PHYSICIAN TO THE GLASGOW WESTERN INFIRMARY AND THE ROYAL HOSPITAL
FOR SICK CHILDREN: HON. LIBRARIAN TO THE FACULTY OF
PHYSICIANS AND SURGEONS, GLASGOW: ETC.



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LIFE AND WORKS
OF
DR. ROBERT WATT

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WATT's 'Bibliotheca Britannica' is known wherever English bibliography is cultivated, whether in this country or abroad; but there is often a singular absence of any knowledge of its author. Even in Glasgow, and within his own profession, he is but little known, while some of those familiar with his book are scarcely aware that he was a Doctor of Medicine, and still less that he was a practising physician in Glasgow. The final title page and preface alike fail to reveal his place of residence and work, or even that he had been engaged in actual medical practice. A short memoir submitted by Mr. Mason to the Conference of Librarians in Glasgow in 1888 gave information which led, no doubt, to his being better known both to the Glasgow public and to the librarians of the country.

When a man obtains a world-wide celebrity in one direction, there is a natural curiosity as to his

work in other departments and as to his general character. Watt's death at the age of forty-five was no doubt hastened by his stupendous labours at the 'Bibliotheca,' and this early death and the previous bad health necessarily lessened his chance of distinction in the medical profession, in which time is generally needed for acquiring any wide reputation. There is some difficulty in obtaining accurate information about his life and his professional work, but enough is known to show that he was a man who made his mark even apart from the four monumental volumes of the 'Bibliotheca.'

The best account of Dr. Robert Watt appeared in Chambers' 'Biographical Dictionary of Eminent Scotsmen.' The last edition of this work was edited by Thomson, in three volumes, and published by Blackie & Son, Glasgow and London, in 1870; the first edition of the 'Dictionary,' however, published in Glasgow in 1835, contains an interesting autobiographical letter, omitted in the later edition, which describes Watt's early days; in the index to the volume we find that the writer had 'family information.' In preparing this present notice every effort has been made to get data from original sources, but in some details the authority of Chambers—as indicated from time to time—has been accepted; as he states that he had 'family

information,' this may be regarded as sufficient on these matters.¹

The bibliographer's father, John Watt, was a small farmer in the parish of Stewarton, in Ayrshire, about eighteen miles south-west of Glasgow, and Robert was the youngest of three sons; he was born there on May 1, 1774.

The autobiographical letter which follows is stated to have been written a short time before his death. Watt gave these details in response to the request of a friend for some information regarding his early days. The indomitable perseverance there indicated, throws some light on his subsequent achievements. The meeting at Dumfries of the Scottish bibliographer and the great Scottish poet, both from Ayrshire, is interesting as a fact, although the reminiscence is too shadowy to be of much value. It shows, however, the poet's kindness in encouraging a youth in his eager desire for literary improvement.

The following is the letter in full:—

'Among the first things I remember very distinctly was being sent to school, about the age, I

¹ In a newspaper notice of Mr. Alexander Whitelaw's death (cutting dated Glasgow, 1846) it is stated that besides editing the *Literary Casket*, he worked at many books issued by the Messrs. Blackie, and, amongst them, at Chambers' *Dictionary of Eminent Scotsmen*. As Whitelaw was associated with Watt in preparing the *Bibliotheca Britannica*, as explained later on, we may presume that he supervised the notice of his friend's life in Chambers' *Dictionary*.

suppose, of five or six. I was only a short time with my first teacher, and remember little of what was done. With two or three masters, I learned to read English, write, and count. At this time I recollect being rather a favourite with the teacher, and suffering from the envy of my school-fellows on that account. From the difficulties I had to encounter in every branch of learning afterwards, I think my proficiency at that time must have been very small.

‘About the age of thirteen, I became a plough-boy to a farmer in a neighbouring parish. After this, I was sometimes at home, and sometimes in the service of other people, till the age of seventeen. Before this age, I had begun to acquire a taste for reading, and spent a good deal of my time in that way. The books I read were such as I found about my father’s house ; among which I remember the “Pilgrim’s Progress,” “The Lives of Scotch Worthies,” &c. A spirit for extending my knowledge of the country, and other things, had manifested itself early, in various forms. When very young, my great ambition was to be a chapman ; and it was long before the sneers of my friends could drive me from this favourite project. It was the same spirit, and a wish of doing something for myself, that made me go into the service of other farmers. I saw more than I did

at home, and I got money which I could call my own. My father's circumstances were very limited ; but they were equal, with his own industry, to the bringing up of his family, and putting them to trades. This was his great wish. I remember he preferred a trade greatly to being farmers' servants.

' With a view to extend my knowledge of the country, I went with a party into Galloway, to build stone dykes. On getting there, however, the job which we had expected was abandoned, on account of some difference taking place between the proprietor of the land and the cultivator ; and we went to the neighbourhood of Dumfries, where our employer had a contract for making part of the line of road from Sanquhar to Dumfries. During my short stay in Galloway, which was at Loch Fergus, in the vicinity of Kirkcudbright, I lodged in a house where I had an opportunity of reading some books, and saw occasionally a newspaper. This enlarged my views, increased the desire to see and learn more, and made me regret exceedingly my short stay in the place.

' On our arrival at Dumfries, we were boarded on the farm of Ellisland, in the possession of Robert Burns. The old house which he and his family had recently occupied became our temporary abode. This was only for a few days. I was

lodged, for the rest of the summer, in a sort of old castle, called the *Isle*, from its having been at one time surrounded by the Nith. While at Ellisland, I formed the project of going up to England. This was to be accomplished by engaging as a drover of some of the droves of cattle that continually pass that way from Ireland and Scotland. My companions, however, disapproved of the project, and I gave it up.

‘During the summer I spent in Dumfriesshire, I had frequent opportunities of seeing Burns ; but cannot recollect of having formed any opinion of him, except a confused idea that he was an extraordinary character. While here I read Burns’s poems ; and, from an acquaintance with some of his relations, I occasionally got from his library a reading of other works of the same kind. With these I used to retire into some of the concealed places on the banks of the Nith, and pass my leisure hours in reading, and occasionally tried my hand in writing rhymes myself. My business at this time consisted chiefly in driving stones, from a distance of two or three miles, to build bridges and sewers. This occupation gave me a further opportunity of perusing books, and although, from the desultory nature of my reading, I made no proficiency in any one thing, I acquired a sort of smattering knowledge of many, and a desire to

learn more. From this period, indeed, I date the commencement of my literary pursuits.

‘On my return home, the first use I made of the money I had saved was to purchase a copy of Bailey’s Dictionary and a copy of Burn’s English Grammar. With these I began to instruct myself in the principles of the English language in the best way I could.

‘At this time my brother John, who had been in Glasgow for several years, following the business of a joiner and cabinet-maker, came home, with the design of beginning business for himself in the country. It was proposed that I should join him. This was very agreeable to me. I had, at that time, no views of anything higher; and it accorded well with the first bent of my mind, which was strongly inclined to mechanics. If of late all my spare hours had been devoted to reading, at an earlier period they had been equally devoted to mechanics. When very young, I had erected a turning lathe in my father’s barn; had procured planes, chisels, and a variety of other implements, which I could use with no small degree of dexterity.

‘For some time my mind was wholly occupied with my new trade. I acquired considerable knowledge and facility in constructing most of the different implements used in husbandry, and could

also do a little as a cabinet-maker. But I soon began to feel less and less interest in my new employment. My business came to be a repetition of the same thing, and lost all its charms of novelty and invention. The taste for reading which I had brought from the south, though it had suffered some abatement, had not left me. I was occasionally poring over my dictionary and grammar, and other volumes that came in my way.

‘At this time, a circumstance occurred which gave my mind an entirely new bent. My brother, while at Glasgow, had formed a very close intimacy with a student there. This young gentleman, during the vacation, came out to see my brother, and pass a few days in the country. From him I received marvellous accounts of what mighty things were to be learned, what wonders to be seen, about a University ; and I imbibed an unquenchable desire to follow his course.’

An interesting supplement to this narrative is given by Mr. Duncan Macfarlane, schoolmaster in Stewarton, who drew up the account of that parish for ‘The New Statistical Account of Scotland,’ vol. v., Edinburgh, 1845. The notice is dated ‘April 1840, revised January 1842.’ It would seem that the writer was the man who prepared Watt for beginning his University course. He says :—

‘He was born on 1st May, 1774. The name of

the farm in the parish record is Bonnyton,¹ not Muirhead, now Girgenti, so named by its present proprietor, John Cheape, representative of the Cheapes of Sauchie, Stirlingshire. The account of him inserted in the "Life" above alluded to [Chambers' "Dictionary"] closes when his studies in the Latin and Greek languages commenced with the writer of this account in October or November, 1792; and he was then about eighteen years old. It was only one hour's private attendance in the morning that he could spare, as he had his occupation of carpenter to attend to through the rest of the day. Notwithstanding, such progress did he make in both languages, that he entered the Latin and Greek classes of Glasgow University in 1793, and obtained a prize in the Greek class from Professor Young. In 1794, he attended the Greek and Logic classes also at Glasgow; and in 1795-96, the Moral and Natural Philosophy classes at Edinburgh. During the summer, 1796, he taught a private school in Kilmaurs parish, when he became an admirer of the late Rev. Mr. John Russell of Kilmarnock,

¹ Chambers, *op. cit.*, gives the name as 'Muirhead.' An extract from the Stewarton records, now in the Register House, Edinburgh, bears:

'1774 May first

Robt a son to John Watt in Bonnyton
and Jatt Calderwood his Spouse baptised 2'

The termination of 'Bonnyton' is a little indistinct in the register. 'Jatt' is a contraction for 'Janet.'

the "Rumble John" of Burns. He then resolved to study divinity, and, in order to have two strings to his bow, also anatomy at Edinburgh, which he did in 1796-97. An essay on "Regeneration" was prescribed, for which 10*l.* were to be given, and which he obtained. Professor Hunter, on delivery of the prize, was pleased to remark "that it was not only the best essay, but the first time, under him, that a student of the first year's standing attempted and succeeded so well and so deservedly." In 1797-98, he spent one year in Symington¹ as parochial schoolmaster, and merely enrolled his name as a student of divinity in Edinburgh, when an essay on "Prayer" was announced by Professor Hunter, for which a prize of 8*l.* was to be given, and which he also obtained. During his residence at Symington, the Rev. Mr. Logan, minister of the parish, induced him, for reasons unnecessary to state here, to give up the study of divinity, and finish his medical studies, which he did in Glasgow in 1798-99. I have thought proper to be thus particular in the detail of the studies of one who was an honour and ornament to his country, and cut off early in life.'

This account differs slightly from that given in Chambers' 'Dictionary,' but it is evidently stated with accuracy and from personal knowledge. The

¹ A village in Ayrshire, six miles south-west of Kilmarnock.

matriculation entry in the Glasgow University Album for 1793-94 is as follows :—

‘Robertus Watt fil: n. 3^{tus} Joannis Agricolaë in Par. de Stewartown (Ayr).’

There is, however, no degree entered for him, either in arts or medicine, in the Glasgow records.

As mentioned above, Watt studied in the University of Edinburgh, and amongst the entries for 1795 there is :—

‘Robertus Watt—Phys. Eth.’

This quite confirms Mr. Duncan Macfarlane’s statement that he attended the classes of ‘Moral and Natural Philosophy’ (Ethics and Physics) that year in Edinburgh. He did not, however, graduate there.

In some authoritative works (Allibone’s ‘Dictionary of English Literature,’ and the ‘Index-Catalogue of the Library of the Surgeon-General’s Office, U.S. Army’), we find under Watt’s name the entry of an inaugural dissertation, Edinburgh, 1803, ‘De Scarlatina Anginosa’: but the index to the Edinburgh Theses shows this to have been by a different man—a native of Jamaica; in point of fact, Watt obtained his M.D. degree not from Edinburgh, but from King’s College, Aberdeen, on March 20, 1810, as appears in the register of graduates recently published by the New Spalding Club.

No record of his being apprenticed to a surgeon can be traced in the minutes of the Glasgow Faculty. Peter Mackenzie, in his 'Reminiscences,' says that in 1793 Watt 'got into the apothecary shop of old Moses Gardner,' in Glasgow; but this date was before he contemplated the study of medicine, and in any case, even if true, the fact can have no relationship to an apprenticeship, as Moses Gardner did not become a member of the Faculty in Glasgow till 1798. Probably Watt was never apprenticed at all, as the regulations in this respect were then in a state of transition.

On April 6, 1799, he obtained the Licence of the Glasgow Faculty of Physicians and Surgeons, and at once began general practice in Paisley. It was while there that he wrote his treatise on 'Diabetes, &c.,' based upon cases he had observed. This was published in Paisley in 1808, and was dedicated to Mr. James Muir, surgeon in Paisley, by his 'partner and friend' the author. Muir was licensed by the Glasgow Faculty in 1802, and subsequently admitted as a member in 1810; he latterly practised in Glasgow, and was for a time a partner with Professor John Burns, so well known from his works on midwifery and otherwise. From his association with two such men, Muir may be presumed to have been himself an able practi-

tioner¹; but his reputation seems to have been considerable in connection with art also; indeed, it is supposed to be to him that we are indebted for one of Watt's portraits, now in the Faculty Hall in Glasgow, representing him when still a young man.

Very soon after settling in Paisley as a general practitioner, Watt made some contributions to the London 'Medical and Physical Journal.' We find, in March 1800, 'A description of a new instrument for operating for the stone' (with an engraving to illustrate it), and in August of the same year, 'Description of a new machine for curing distorted limbs' (also illustrated), a paper which gave rise to a controversy in that journal with Mr. Sheldrake of London. To the same journal Watt sent a letter, which appeared in May 1801, on vaccine inoculation taking effect in those who have had small-pox, and on vaccinia and small-pox existing simultaneously in the same subject. To the 'Edinburgh Medical and Surgical Journal' of July 1809, he contributed a reply to criticisms made on his views on 'Diabetes.' The publication of all these papers, and of a considerable volume, so soon after settling in Paisley, indicates his literary activity and

¹ There is a paper on Ophthalmia 'Communicated to Dr. Watt by Mr. James Muir, Surgeon, Paisley,' in February 1811, after Watt had removed to Glasgow. See *Edin. Med. Surg. Journal*, April 1811.

his relationship with important periodicals in London and Edinburgh. His treatise on 'Diabetes' was at once recognised as the work of an able man, and his views were discussed and accepted or disputed, as already indicated; for example, in 'Craigie's Practice of Physic,' Edinburgh, 1840, the book is quoted again and again. Subsequent researches and discoveries in connection with this disease have so completely altered our standpoint, that it is scarcely worth while estimating his views on this subject now. While in Paisley, he seems to have occupied himself also with chemical studies and inquiries (see MS. quoted in Appendix).

Finding his reputation increasing, Watt contemplated a wider field for practice; he had become a member of the Glasgow Faculty in 1807, a higher grade than a mere licentiate. Chambers tells us that he made a tour in England in 1809, on the outlook for some suitable sphere, but apparently without success. He then determined to settle in practice in Glasgow as a physician, and, no doubt with this project in view, he obtained the degree of Doctor of Medicine, from King's College, Aberdeen, on March 20, 1810, as already stated. His sponsors are given as 'Drs. Robert Cleghorn and Thomas Brown, Glasgow,' both of them very distinguished physicians at that time.

Dr. Watt began practice as a physician in

Glasgow in the winter of 1810, and he likewise began almost at once to lecture on 'The Theory and Practice of Medicine' (1810 or 1811). He had a large house in Queen Street, and it has been supposed that he may have lectured there; possibly, however, he lectured in the College Street rooms, where Allan Burns, Granville Sharp Pattison, and Andrew Russell taught anatomy and surgery.¹ It is a remarkable feature as regards this class that he published a 'Catalogue of Medical Books for the Use of Students attending Lectures on the Principles and Practice of Medicine, with an Address to Medical Students on the best Method of prosecuting their Studies, Glasgow, 1812.' This entry has been copied from the 'Bibliotheca Britannica,' as the present writer has been unable to find any copy preserved, although he has inquired at various libraries likely to have it, and it does not occur in the Catalogues printed by the British Museum or the Faculty of Advocates in Edinburgh.

The conception which Watt had of medical teaching seems to have been very different from that entertained by not a few subsequent lecturers on medicine, who virtually aim at dictating from their own lips the whole sum of human

¹ Watt's class-ticket was different in appearance from those used by two of the other lecturers named; it does not indicate, in any way, the locality of the lecture-room.

knowledge required by their disciples. Watt evidently hoped that his lectures would only stimulate his pupils to further reading, which he facilitated by an index-catalogue to his own library.¹ In utilising his library in this way for the benefit of his pupils, Watt was following the example of an older Glasgow surgeon, Mr. John Paisley, who is said to have had an unusually good collection of books, which were available for consultation by his apprentices; amongst these was the celebrated Cullen, who no doubt cultivated there an acquaintance with medical literature; and when the old pupil became a lecturer in Glasgow University, Mr. Paisley's library was thrown open to Cullen's students.

The catalogue by Watt of his own medical library has, however, a further importance, as explained in Chambers' 'Dictionary':—

'The "Bibliotheca Britannica" may be said to have originated with the formation of this library. Besides the catalogue of it which was printed in the usual form, having the works arranged under their respective authors, in alphabetical order, he drew out an index of the various subjects which the volumes embraced, making references

¹ Quite in accordance with this, we are told by Chambers that Watt soon departed from reading lectures to his students, and delivered them simply from notes to guide him.

to the place which each held upon the shelf; and thus brought before his eye at one view all the books in his possession that treated on any particular point. The utility of this index to himself and his students soon turned his mind to the consideration of one upon a more comprehensive scale, that would embrace all the medical works which had been printed in the British dominions. This he immediately set about drawing out, and devoted much of his time to it. After he had nearly completed his object, he extended the original plan by introducing works on law, and latterly works on divinity and miscellaneous subjects. This more than tripled his labours, but it proportionably made them more useful. The extent of the design, however, was not yet completed. Hitherto all foreign publications had been excluded from it; and although a prospectus of the work had been published, containing very copious explanations and specimens, which might be supposed to have determined its nature and bounds, he resolved, when it was on the eve of going to press, to make the work still further useful by introducing the more popular and important foreign productions, embracing at the same time the various continental editions of the Classics.’¹

¹ Even this, however, does not indicate all. As stated in the Preface to the *Bibliotheca*, ‘In addition to those titles of distinct or separate publications which came properly under the scope of the work,

This article is apparently so exact, that the above may be regarded as in some sense correct, although no doubt too sweeping in its statement. We must remember that Watt himself states that the project culminating in his great work had been kept in view for 'nearly twenty-six years,' although he admits that his views as to its plan had undergone changes from time to time. This phrase occurs on the back of the First Part of the 'Bibliotheca,' issued in Glasgow in 1819 : the preface, issued after his death, to the completed work (1824) talks of 'unwearied care and indefatigable labour for nearly twenty years.' In either case, this carries us much farther back than his medical class in 1811 or the catalogue of his library in 1812. Indeed, his own phrase of 'nearly twenty-six years,' takes us back exactly to the time when he matriculated as a student in 1793. Possibly the usefulness of his Index to Subjects for this medical library suggested the Subject portion of the 'Bibliotheca.'

all the more important periodical works on art and science have been minutely analysed, and the various papers entered under their author's name, with a reference to the volume and page of the publication where they are to be found. This has been done with the *Transactions of the Royal Societies of London and Edinburgh*, the *Transactions of the American, Linnean, Geological, Horticultural, &c., Societies*, the *Transactions of the Irish Academy*, the *Archæologia*, *Hearn's Collection*, *Duncan's Commentaries*, *Nicholson's Journal*, *Tilloch's Philosophical Magazine*, *Thomson's Annals of Philosophy*, *Medical and Physical Journal*, and many other works of a similar kind.' And further, the second part of the *Bibliotheca* 'includes a very complete list of all the anonymous and pseudonymous works which have appeared in this country.'

In 1813 Watt published a 'Treatise . . . on the Chincough'; but the Appendix to this treatise, 'An Inquiry into the Relative Mortality of the Principal Diseases of Children,'¹ has attained much more celebrity than the Treatise itself.² The research consisted in a laborious investigation of the registers of the various burial places in Glasgow. Fifteen MS. folio volumes of these had to be digested. The result of this investigation astonished himself. He found, as he anticipated, that after the introduction of vaccination, the deaths from small-pox had greatly diminished, and so he expected to find proof of a corresponding reduction in the infantile mortality as a whole. He says:—'To ascertain the real amount of this saving of infantile life, I turned up one of the later years, and by accident that of 1808, when, to my utter astonishment, I found that still a half, or more than a half, perished before the tenth year of their age! I could hardly believe the testimony of my senses, and therefore began to turn up other years, when I found that in all of them the proportion was less than in 1808;

¹ It may be stated, in case of confusion, that another Dr. Watt, viz. Alexander Watt, LL.D., published *Vital Statistics for Glasgow*, 30 years later (1841-46).

² On the title to the Appendix, Watt inserts an appropriate motto from Lucretius:

'—infans . . .

Cui tantum in vita restat transire malorum.'

but still on taking an average of several years, it amounted to nearly the same thing as at any former period during the last thirty years. This was a discovery I by no means expected, and how it could have come to pass appeared to me inexplicable.' (p. 335.)

Commenting on his tabulation of the deaths for a series of years, Watt says:—

'The first thing which strikes the mind on surveying the preceding table is the vast diminution in the proportion of deaths by small-pox: a reduction from 19·55 to 3·90; but the increase in the subsequent column (measles) is still more remarkable, an increase from ·95 to 10·76. In the small-pox we have the deaths reduced to nearly a fifth of what they were twenty-five years ago; in the same period, the deaths by measles have increased more than eleven times.' (p. 376.)

'It must be admitted that while the small-pox were in full force, they had the power of modifying and rendering the measles mild, and now that they are in great measure expelled, the measles are gradually coming to occupy the same ground which they formerly did.' (p. 378.)

The importance of the remarkable result thus brought out by the statistical inquiry and of Watt's induction founded on it, was at once recognised, and Dr. Edward Jenner himself referred to it with

a feeling of irritation. Writing to Dr. James Moore on December 6, 1813, he says :—

‘ You probably may not have seen a pamphlet lately published by Dr. Watt of Glasgow, as there is nothing in its title that developes its purport or *evil tendency* The measles, it seems, have been extremely fatal in the city of Glasgow for the last four or five years among children, and during this period vaccination was practised almost universally. Previously to this the measles was considered a mild disease. Hence Dr. Watt infers that the small-pox is a kind of *preparative* for the measles, rendering the disease more mild. In short, he says, or seems to say, that we have gained nothing by the introduction of the cow-pox; for that the measles and small-pox have now changed places¹ with regard to their fatal tendency. Is not this very shocking?’ (Baron’s ‘Life of Jenner,’ vol. ii., p. 392.)

Watt, who was himself an extremely strong advocate of vaccination, had of course foreseen that his figures might be used as an argument against cow-pox, which he elsewhere calls an ‘inestimable discovery.’ In the preface to his ‘Treatise,’ he faces this nobly :—

‘ The Author has been told that the statements

¹ Let the reader compare this phrase with the dictum of Dr. Farr (subsequently quoted), ‘The Zymotic diseases replace each other.’

he has made are likely to produce injurious effects, in strengthening the prejudice of the vulgar. To this he would reply, that if prejudice is only to be suppressed by concealing the most important facts, he has no idea of purchasing its suppression at so high a price.'

A controversy raged round these tables then, and it may be said to rage still.¹ In a letter to 'The Edinburgh Medical and Surgical Journal,' April 1814, Dr. Watt replies at length to criticisms on the subject in that journal. He says :—

'The result of an investigation is often very different from what was expected, but whatever be the result, the inquiry itself, if conducted with candour and perseverance, will seldom fail to promote the interests of science.' (p. 169.)

Again :—

'Nothing would have induced me to embark in support of an opinion so contrary to established notions, but a conviction of its importance, and a desire to discover the truth. If you, or any of your readers, from the side I have taken, should think me hostile to cow-pox, I can assure you that you

¹ For example, Watt's tables have been quite lately reproduced by John Thomson, Glasgow, 1888, evidently in the interest of the anti-vaccination agitation. They are discussed and their value maintained by Dr. Creighton, *History of Epidemics*, vol. ii., 1894, pp. 652-660. See also White (W.) *The Story of a Great Delusion*, London, 1885, pp. 439-452; and McVail (John), *Vaccination Vindicated*, London, 1887, p. 161.

are mistaken. Indeed, that inestimable discovery has suffered much more from the forwardness of its friends, than the strength of its enemies.' (p. 177.)

Watt has been disparaged for basing his views on the proportions of deaths from special diseases to the total deaths, instead of to the number living ; but such figures, however desirable, were not available for him, and he had to work with the materials which he had himself laboriously searched out. The fairness of his method, so far as it goes, and so far as it was applied, has been admitted by the most competent authorities on Vital Statistics. Sir Gilbert Blane, to whom Watt had dedicated his 'Treatise' on the Chincough, which contains these tables, referred to these statistics in a judicial manner almost immediately after they appeared. (See 'Supplement' to a paper in the 'Medico-Chirurgical Transactions of London,' vol. iv., 1813, p. 466.)

The discussion of such intricate subjects, however, is of little use unless carried on by experts, and the best plan to follow in estimating the value of Watt's communication is to see how it looks to such an authority as Dr. Farr, more than fifty years afterwards. We can see this in his 'Letter to the Registrar-General on the Cause of Death in England' in 1867, where he gives a pretty full

account of Watt's inquiry. (See also his 'Vital Statistics,' London, 1885, pp. 321, 322.) He says :—

'It is, however, by no means proved that the general mortality under unfavourable sanitary conditions is much reduced by rendering a child insusceptible of one type while he remains exposed to all other types of zymotic disease. This was clearly pointed out in a remarkable treatise of Dr. Robert Watt, lecturer on the theory and practice of medicine in Glasgow.' (p. 213 of the Registrar-General's Report.)

Dr. Farr, who describes Dr. Watt as 'evidently a practitioner of great sagacity and a philosophical professor of medicine,' says in summing up :—

'It must be admitted that although there were defects in his data, Dr. Watt succeeded in showing (1) that small-pox was one of the greatest causes of death in Glasgow down to the year 1800 ; (2) that the deaths by small-pox were reduced to a fifth of their original number by vaccination ; and (3) that the children died in nearly the same numbers as before, but of other forms of disease.' (p. 214.)

He adds :—

'Glasgow was then rapidly increasing, and it is possible that the births were then increasing, the mortality is therefore less than it appears to be by

Dr. Watt's method. But this does not invalidate his induction.' (p. 214.)

On this deliverance we may fairly rest Watt's reputation in this department. In a subsequent report, on the year 1872, Dr. Farr repeats and extends in aphoristic form the point made out by Watt:—

'The Zymotic diseases replace each other: and when one is rooted out it is apt to be replaced by others.' (p. 224.)

It was about this time—the issue of his second volume being in 1813—that Watt's professional reputation and activity seemed at their highest. He could not complain that the views, announced in his two books, had been neglected. Indeed, the discussions on them were such as to lead him, apparently unwillingly, to reply in controversial communications, on both subjects, in the 'Edinburgh Medical and Surgical Journal,' in 1809 and 1814 respectively.

Watt was a member of the Medical and Chirurgical Society of London, and a communication by him was read on February 1, 1814. This dealt with a remarkable series of chronometric nervous attacks in a young girl, termed by him 'Chorea.'

The case seems to have had a close resemblance to some forms of the 'Dancing Mania' of the middle ages, as described by Hecker, and it

presented certain features of hystero-epilepsy, as described by Charcot. In particular, there were rotatory phenomena and frequent exploits in the form of standing on her head ('Clownism' of Charcot). Into the medical details of this case we need not enter further; but Dr. Watt's remarks at the close of his paper show his philosophical mind in comparing these extraordinary outbursts of nervous disturbance with those which led many unhappy victims to be regarded as possessed of the devil, or to be burned as witches. Such cruelties had happened, as Watt points out, not far from where he practised, so recently as June 10, 1697, when three men and four women were burned at Paisley in connection with the Bargarran witchcraft case.

Although a member of a distinguished medical society in London, Watt felt the importance of such a means of professional improvement nearer home. He was one of those who, at a preliminary meeting, decided to form the 'Medical Society' in Glasgow, the first of its kind there, and we may gather that he was the leading promoter of it by his being called to the chair at this meeting, and by his being elected the first president in 1814. This society, although amalgamated with another many years ago, continues to the present day under a slightly different name. A paper by Watt

appropriately opens volume i. of the MS. Transactions still preserved in the Faculty Library in Glasgow. As in the teaching of medical students Watt saw that lectures should incite to reading, so in the case of practitioners he saw that collision of other opinions was required for their improvement. His energy was such that he successfully carried out both of these methods.

Of Watt's Lectures nothing definite has been traced, but judging from the custom of the time it is quite possible that some MS. reports, taken by his students, may lie hidden in private houses or libraries.

Further indications of the importance of Dr. Watt's professional position at this time may be gathered from his election as Physician to the Royal Infirmary in Glasgow, and as President of the Faculty of Physicians and Surgeons, both in 1814.

That he might have made good literary use of his position in the Infirmary, if life and health had been granted to him, appears from his MS. essay in the Transactions of the Medical Society, already referred to, 'On the Nature and Treatment of Erysipelas' (1815), in which he gives various cases bearing on the question of the contagiousness of this disease, from his experience in the wards of the hospital.

In 1816 Dr. Watt was elected President of the Glasgow Philosophical Society (1816-17). He had joined this society on coming to Glasgow in 1810, and he made some communications to it; in particular, he read extracts from certain essays, which he had written some time before, bearing upon Flame; this was in November and December 1816. It has been supposed that these extracts were from the MS. on 'Light, Heat and Cold,' mentioned in the Appendix. On December 16, 1816, he read another essay to the society on the 'Natural History of Man.' So far as can be ascertained, these papers were never published.

The additional work connected with these new duties, and his continuous toil at the 'Bibliotheca,' proved too much for a delicate constitution. Soon after the expiry of his term as President of the Faculty, he retired from his duties at the Infirmary, and indeed shortly afterwards he withdrew from practice altogether, hoping thus to be able to finish his 'Bibliotheca' before he died.

About this period (1814) he brought out, anonymously, a little book entitled 'Rules of Life, with Reflections on the Manners and Dispositions of Mankind.' This consists of 1001 aphoristic sayings; some new, some old, but most of them old sentiments 'in new dresses,' as he says in the preface. A book of this kind does not indicate

much of the character of the author except as regards industry in noting down these sayings in a common-place book; and the somewhat careful index of subjects shows the instinct of the bibliographer. The last aphorism may be quoted as a specimen, and as affording the explanation of the well-deserved continuance of Watt's reputation as a bibliographer and a statistician.

'1001.—The sincere performance of our duty is the only sure foundation we can lay for future and solid satisfaction.'

It was in the beginning of 1817 that Dr. Watt withdrew from practice. He says, in a note on the back of the cover of Part I. of the 'Bibliotheca,' in 1819, that 'he saw himself verging towards the afternoon of life in an impaired state of health,' and his great work was still unfinished. He had gone to Campvale, then about two miles south of Glasgow, although now incorporated with it, and he remained there till his death. There, with the assistance of his sons, of Motherwell, the Glasgow poet, and of Alexander Whitelaw, who edited the 'Literary Casket,' he urged on the work, often directing the assistants from his sick bed.¹ A

¹ Chambers *op. cit.*—In a newspaper notice of the death of Mr. Alexander Whitelaw (Glasgow, 1846) it is stated that Whitelaw and Motherwell offered their services in response to an advertisement by Watt; and that when Motherwell had to give this up, owing to newspaper work in Paisley, Whitelaw continued the editing, with the son, after Watt's death.

voyage in a smack, from Leith to London, and a tour in England in search of health, had resulted in disappointment.¹ An advertisement, dated December 1, 1818,² announced that the first portion of his work would be issued in February 1819; but the usual delays occurred; and, as the preface states, the author 'died when only a few of its sheets were printed off.'

The 'Glasgow Herald' of March 22, 1819, simply announces amongst the deaths, 'On the 12th inst.. at Campvale, near Glasgow, Dr. Robert Watt, in his 45th year.'

The cause of his death is put down by Chambers to 'a stomachic disorder' which had begun in youth; according to the 'Reminiscences' of Peter Mackenzie, he 'died of consumption.' It is quite possible that both statements are correct, the one condition leading up to the other.

The work had been prepared on the basis of a list of subscribers. This list was issued with the second part of the 'Bibliotheca'; and in some copies of the bound volume it has been preserved, although omitted in others. It contains over 400 names; amongst these we find many merchants and lawyers in Glasgow, with several members of

¹ Chambers *op. cit.*

² There is a copy of this preserved in the Mitchell Library in Glasgow in Maidment's scrap-books. It is this which is mentioned in *The Edinburgh Medical and Surgical Journal*, January 1819, p. 157.

the University, and not a few of his own profession ; some libraries in the city are also in the list.

In the 'Bibliotheca' itself, under Watt's name, it is stated that Parts I. to IV., 1819-20, were issued in Glasgow ; Part V. and onward in Edinburgh, 1821-24.

For the Mitchell Library in Glasgow, Mr. Barrett, the librarian, secured by a lucky accident the first two parts in their original boards numbered Part I., No. I., and Vol. I., Part II., respectively ; the title on the boards is different from the title page of the completed work ; it agrees with the title in Dr. Watt's MS. As already stated, there is a kind of preface on the paper back of the cover, with an account of the plan of the work and of Watt's reason for issuing it in parts to subscribers. He explains that he had hoped thus to secure some benefit to his family from the work which had occupied so much of his life. It bears, 'Printed for the author at the University Press, and published by Archibald Constable & Co., Edinburgh ; Longman, Hurst, Rees, Orme, & Brown, London ; and Andrew & John M. Duncan, Glasgow, 1819.' It also contained a specimen of the Subject-Index, which was to follow.

With the death of the author it was feared the subscribers might take alarm and drop their sub-

scriptions, thinking that his death might lead to the failure of the work. In view of this, there was issued with the First Part a printed circular to the subscribers, dated April 14, 1819, assuring them of the preparations being sufficient to carry the work through. This circular is bound up with some of the copies of the 'Bibliotheca,' but, like the list of subscribers, it is absent in others. For this reason, it may be worth while reproducing it. The reporters were Dr. Chalmers and Dr. Wardlaw, the well-known divines; Prof. Jardine of the Chair of Logic in the University, and James Ewing, Esq.

'TO THE SUBSCRIBERS

'Glasgow : April 14, 1819.

'In consequence of the lamented death of the late Dr. Robert Watt of this city, we have been requested by his family and his publisher to examine the manuscripts of the "Bibliotheca Britannica," left by him in the possession of his son, and now in course of publication. In compliance with this request, we have this day inspected the numerous written volumes of this laborious work, going through the contents of each letter seriatim and comparing their relative proportions.

'It was not, of course, within our commission to form any judgment of the execution and merits of

the work itself, but we are happy to have it in our power to assure the subscribers, that, as far as our examination could enable us to judge, it has been left by the author throughout in a state of readiness for publication. Nor can we forbear adding our attestation to the striking evidence afforded by it of indefatigable industry and unwearied perseverance, in a department of labour too, which, however useful in its results, must appear to most minds to possess few allurements in the execution. The author, we understand, devoted the greater part of the last twenty years of his life to the collection and arrangement of the necessary materials; and of these the whole has been copied thrice, and some parts of them even six and seven times. During the last four years his son has been engaged, under the direction of his father, in forwarding and completing the work; and from the experience he has thus had, as well as in other respects, we have no doubt of his qualifications for perfecting what yet remains to be done, in adding the new publications which may make their appearance during the progress of the work through the press.

‘It is with sincere satisfaction we thus state our conviction, that this important work is not likely to suffer from the decease of its author—and it is, at the same time, our earnest desire and

hope, that his bereaved family may reap, both in credit and emolument, the fruits of the courage which projected, and the industry which completed a publication which, we are satisfied, will, on several accounts, form a very valuable acquisition to the Literary World.

‘GEORGE JARDINE, Professor of Logic in the University of Glasgow.

‘RALPH WARDLAW, Minister of the Gospel.

‘JAMES EWING, late Dean of Guild, in the City of Glasgow.

‘THOMAS CHALMERS, Minister of the Tron Church, Glasgow.’

The financial arrangements made were that the publishers should pay Mrs. Watt 2,000*l.* for the work; but Constable’s failure before any payments were made wrecked the hopes of the family.¹ One disaster after another occurred. The house of Mrs. Watt was broken into by burglars in December 1819, and it is said that even her rings were stripped off her fingers. Four men were executed in Glasgow next year for the crime. The name of this lady was Marion Burns, and Dr. Watt had married her while he practised in Paisley. On his death, she became entitled to a pension, from the Widows’ Fund of the Faculty, amounting to 45*l.* a year; this she continued to draw for thirty-seven and a

¹ Chambers *op. cit.*

half years, till her own death on September 7, 1856. There was a large family, but one son died soon after his father, and the other son, who had assisted in the editing, died a few years after the completion of the work. Very soon, one after another, the family died off, leaving only the youngest daughter; and then the widow herself died. With her death, of course, the pension lapsed, and the youngest daughter only was left; she soon became insane, and died in the poor-house, in 1864, just at the time when the Government authorities were making up their mind to give a pension of 50*l.* a year instead of the 100*l.* which had been asked for by some of the leading authors in the country, who thought her father's labours deserved recognition in this way.

After her death, the parochial authorities sold a few articles which were in her possession when she was taken in charge. Amongst these were two large sacks full of slips of paper, bundled up, apparently without any order. This proved to be the MS. of the 'Bibliotheca.' It was purchased on behalf of Paisley by the late Dr. Richmond, of that town, empowered to do so by Thomas Coats, Esq., who is stated to be the donor of it to the Free Library in Paisley; this is appropriate enough, as it was in this town that Watt first began his practice. The MS. has now been arranged in due

alphabetical order, in a series of volumes, fifteen for the Authors, and fifty-four for the Subjects.

An examination of this MS. shows that the Subjects were indexed by using the sheets of the 'Bibliotheca' itself from the list of Authors. By the use of headings and copious deletions, the entries for many of the Subjects were obtained. This accounts for the relatively great number of volumes in the Subject department, the volumes of which are larger, as well as more numerous than in the other section. The MS. title page differs from the one finally printed. It agrees with that printed on Part I. up to the name of the author ; it is as follows :—

THE
BIBLIOTHECA BRITANNICA
OR
A GENERAL INDEX
TO THE
LITERATURE OF GREAT BRITAIN AND IRELAND
ANCIENT & MODERN
INCLUDING
SUCH FOREIGN WORKS
AS HAVE BEEN TRANSLATED INTO ENGLISH OR PRINTED
IN THE BRITISH DOMINIONS
AS ALSO A COPIOUS SELECTION FROM THE WRITINGS OF THE MOST
DISTINGUISHED AUTHORS OF ALL AGES AND NATIONS
IN TWO DIVISIONS
VOL. I PART I FROM AA TO BALL INCL.
BY ROBERT WATT, M.D.

At the present day it is waste of time to discuss the value of Watt's work. That there are errors

and omissions may be taken for granted. Any one who has tried to make a catalogue of 100 books knows how difficult it is to secure accuracy, even with the volumes at hand. It is admitted, however, that Watt's plan is admirable; the method adopted of having a separate list for Authors and Subjects has enormous advantages; on the back of Part I., Watt discusses the advantages and disadvantages of single or double alphabetical lists, and gives sound reasons for preferring the latter plan in his work. The conception of the 'Bibliotheca' is also admitted to have been bold even to the verge of audacity; indeed the question is whether such a labour should have been undertaken by any individual without a set of fellow-workers being secured. The work was published, but the author's life was lost; and probably his two sons were also sacrificed. The best estimate of Watt's work may be had in the way we followed in the case of his Mortality Statistics; let them both be judged by experts, and by the standard of to-day. The enormous additions to our literature since 1820, and the publication of the magnificent catalogue of printed books in the British Museum lessen, to some extent, the practical value of Watt's work at the present day, but in every library, with any pretensions to bibliographical apparatus, his 'Bibliotheca' is at hand and in regular use, a remarkable testimony of approval,

nearly eighty years after his death, which must silence all cavilling. That he died when only a few sheets were printed off may surely be admitted in extenuation of any defects in the execution.

Some curiosity has been felt as to how Watt could obtain the materials for making his list of Authors, living as he did in Glasgow, before communication with London or even Edinburgh was easy or rapid.

In Lowndes' 'Bibliographer's Manual' (1871) it is stated that he obtained his materials 'from Ames' Typ. Antiq. by Herbert and Dibdin, the Monthly, Edinburgh, and Quarterly Reviews, the Catalogues of the British Museum, Bodleian and Advocates' Libraries, Clarke's Bibliographical Dictionary and Supplement, &c.' This statement, however, seems a most inadequate explanation. Watt, no doubt, in his preface states that 'all the early British printers noticed by Ames, Herbert and Dibdin have been inserted : ' but the British Museum Catalogue then was very different from what it is now : the Bodleian Catalogue was even less serviceable for such a purpose. No doubt in the Glasgow University Library itself and in the rarities of the Hunterian collection there, he had important means for bibliographical study, as the Hunterian Museum was opened in 1808. May

not his tour in England, before he settled in Glasgow, have been one chance he took for extending his bibliographical lists, as he tells us that he had been keeping the work in view for more than twenty years? Possibly, also, he made visits to London of which we have no knowledge. His membership of the Medical and Chirurgical Society in London would seem to suggest such visits, and his acquaintanceship with Sir Gilbert Blane, to whom he dedicated his 'Treatise on Chincough,' would also suggest a London connection. The difficulties, however, at that time, of his visiting London and the University towns were so great, and the difficulty of finding time in the case of one engaged in the practice and teaching of medicine must also have been such, that astonishment is felt at his even contemplating such a task, and still more at his carrying it through.

Amongst Miss Watt's effects, disposed of after her death, were the two portraits of her father which are now in the possession of the Faculty of Physicians and Surgeons, Glasgow, and preserved in their Hall. One represents him as a young man; this is the one which is supposed to have been painted by Mr. James Muir, his partner in practice in Paisley, who, as already stated, had artistic accomplishments. The other represents him when he must have been in his maturity; it

has been supposed by good judges to be by Sir Henry Raeburn, the celebrated Scottish portrait painter. This has been reproduced as a photogravure for the present memoir. A third portrait, apparently intermediate in point of age, was in the possession of the late Alexander Whitelaw, Esq.: it was lent by his widow, Mrs. Whitelaw, Rowmore, Row, for the 'Old Glasgow' Exhibition held in 1894, and it is entered in the 'Memorial Catalogue of the Old Glasgow Exhibition, 1894,' Glasgow, 1896, under the number 138. The painter is unknown. This Mr. Whitelaw was a nephew of Alexander Whitelaw of the 'Literary Casket.' A pair of miniatures, representing Dr. and Mrs. Watt, are also preserved at Rowmore. In this miniature Dr. Watt is evidently younger than in the portrait given in the present memoir.

APPENDIX

I

DATES IN DR. ROBERT WATT'S LIFE

- May 1, 1774. Born near Stewarton, in Ayrshire.
- 1793-1795. A matriculated student in the Arts classes, Glasgow University.
- 1795-1796. Attended Moral Philosophy and Natural Philosophy classes, in Edinburgh University.
- Summer 1796. Taught in a private school in Kilmaurs.
- 1796-1797. Attended classes in Divinity and Anatomy in Edinburgh University.
- 1797-1798. Parochial Schoolmaster in Symington, Ayrshire.
- 1798-1799. Medical Studies in Glasgow. (His name occurs in the roll of the Anatomy class.)
- April 6, 1799. Licentiate of the Faculty of Physicians and Surgeons, Glasgow.
- 1799-1810. In general practice in Paisley.
- January 5, 1807. Member of the Faculty of Physicians and Surgeons, Glasgow.
- March 20, 1810. M.D. King's College, Aberdeen.
- 1810-1817. In practice in Glasgow as a Physician.
- October 1, 1810. Admitted a member of the Glasgow Philosophical Society.
- About 1811. Member of the Medical and Chirurgical Society of London. (Not an original member, but in the list contained in vol ii. of the Transactions.)

- 1811-1816. Lecturer on the Theory and Practice of
Medicine in Glasgow.
- 1814-1815. First President of Glasgow Medical Society.
- 1814-1816. President of the Faculty of Physicians and
Surgeons, Glasgow.
- 1814-15-16. Physician to the Glasgow Royal Infirmary.
- 1816-1817. President of the Glasgow Philosophical
Society.
- 1817-1819. Retired from practice to finish 'Bibliotheca.'
- March 12, 1819. Died at Campvale, near Glasgow.

II

DR. ROBERT WATT'S PUBLISHED WORKS AND PAPERS

Books

1. 'Cases of Diabetes, Consumption, &c. with Observations
on the History and Treatment of Disease in general.' By
Robert Watt, Member of the Faculty of Physicians and Sur-
geons, Glasgow. Paisley: Printed for Archibald Constable &
Co., Edinburgh, &c., 1808, 8vo. pp. 327.
2. 'Catalogue of Medical Books for the Use of Students
attending Lectures on the Principles and Practice of Medicine;
with an Address to Medical Students on the best method of
prosecuting their Studies.' Glasgow, 1812, 8vo.
3. 'Treatise on the History, Nature, and Treatment of
Chincough: including a variety of Cases and Dissections. To
which is subjoined An Inquiry into the relative mortality of the
principal Diseases of Children, and the numbers who have died
under ten years of age in Glasgow, during the last thirty years.'
By Robert Watt, M.D., Member of the Faculty of Physicians
and Surgeons of Glasgow, Member of the London Medical and
Chirurgical Society, &c., and Lecturer on the Theory and on
the Practice of Medicine in Glasgow.

'—quaeque ipse miserrima vidi

Et quorum pars magna fui.'—*Virg.*

Glasgow: Printed for John Smith & Son, &c., 1813, 8vo. pp.
392.

4. 'Rules of Life ; with Reflections on the Manners and Dispositions of Mankind.' Edinburgh : Printed by James Ballantyne & Co. For Longman, Hurst, Rees, Orme & Brown, 1814, small 8vo. pp. 278. (Published anonymously, but advertised as by the same author, on the cover of the first part of the 'Bibliotheca Britannica.')

5. 'Bibliotheca Britannica ; or a General Index to British and Foreign Literature. By Robert Watt, M.D. In Two Parts. Authors and Subjects.' 4 volumes 4to. Edinburgh : Constable & Co. 1824. (Parts 1 to 4, Glasgow, 1819-20 ; Parts 5 to 9, Edinburgh, 1821-24.)

Contributions to Periodical Literature

1. 'Description of a new Instrument for operating for the Stone (with plate). Communicated by Mr. Robert Watt, Surgeon, in Paisley.' 'The Medical and Physical Journal,' London, March 1800, vol. iii. pp. 195-198.

2. 'Description of a new Machine for curing distorted Limbs (with an engraving). Communicated by Mr. Robert Watt, Surgeon, in Paisley.' 'The Medical and Physical Journal,' London, August 1800, vol. iv. pp. 93-97.

3. 'Letter to the Editors' [On Vaccine Inoculation and Small-pox, showing that a previous attack of small-pox does not prevent vaccine inoculation from taking effect ; and on the two diseases existing at the same time, and yet continuing perfectly distinct.] 'The Medical and Physical Journal,' London, May 1801, vol. v. pp. 430-432.

4. 'Observations on the Treatment of Diabetes. By Mr. Robert Watt, Surgeon, Paisley.' 'The Edinburgh Medical and Surgical Journal,' July 1809, vol. v. pp. 287-298.

5. 'On the Treatment of Diarrhœa and Dysentery.' 'The Edinburgh Medical and Surgical Journal,' April 1811, vol. vii. pp. 241-243. (In letters dated from Glasgow, February 6 and 9, 1811.)

6. 'Cases of Periodical Jactitation or Chorea. By Robert Watt, M.D., President of the Faculty of Physicians and Surgeons at Glasgow, Physician to the Royal Infirmary, and Lecturer on the Theory and Practice of Physic at Glasgow.' (Read February 1, 1814.) 'Medico-Chirurgical Transactions Published by the

Medical and Chirurgical Society of London,' vol. v. London, 1814, pp. 1-23.

7. 'Observations on the Influence of Vaccination on other Diseases and on Population in general. By Robert Watt, M.D., Lecturer on the Theory and on the Practice of Medicine, Glasgow.' 'The Edinburgh Medical and Surgical Journal,' April 1, 1814, vol. x. pp. 168-178.

8. 'On the Formation of the Rainbow.' By Robert Watt, M.D. (Letter to the Editor, Professor Thomas Thomson, November 4, 1818.) 'Annals of Philosophy,' London, February 1819, pp. 131-133.

III

DR. ROBERT WATT'S MANUSCRIPTS

'Observations on the Nature and Treatment of Erysipelas.' 'Essays of Glasgow Medical Society,' vol. i. No. 1. Read January 17, 1815. MS. Volume in the Library of the Faculty of Physicians and Surgeons, Glasgow.

'Observations on Cancer.' *Ibid.* vol. ii. No. 1, Read January 16, 1816.

MS. of Treatise on Chincough, with Tables of Mortality. (See full Title under published works.) This MS. volume was presented to the Glasgow Faculty of Physicians and Surgeons by Dr. A. D. Anderson, and is now in their library.

MS. of 'Bibliotheca Britannica.' This has been carefully arranged and bound in sixty-nine volumes (fifteen of Authors and fifty-four of Subjects) and preserved in the Paisley Free Library—Reference Department.

In addition to the above, the following title of a MS. is given by Chambers, written in 1805, while in Paisley, but nothing is known as to where it is now, 'An Abstract of Philosophical Conjectures; or an Attempt to Explain the Principal Phenomena of Light, Heat, and Cold, by a few simple and obvious Laws.' 4to.

IV

SOURCES OF INFORMATION FOR THIS MEMOIR

Chambers (Robert), 'Lives of Illustrious and Distinguished Scotsmen from the earliest period to the present time, arranged in alphabetical order, and forming a complete Scottish Biographical Dictionary.' 4 vols. Glasgow, 1835. (This edition is of special importance.)

Macfarlane (Duncan), 'Parish of Stewarton.' 'The New Statistical Account of Scotland.' Vol. v. Edinburgh, 1845, pp. 730-731.

Duncan (Alexander), 'Memorials of the Faculty of Physicians and Surgeons of Glasgow 1599-1850.' Glasgow, 1896. (Consult Index, under Robert Watt and James Muir.)

Faculty of Physicians and Surgeons, Glasgow. Minutes and Lists of Licentiates and Members: Records of Widows' Fund: Library Catalogue, for Watt's MSS., and the original volumes in the Library. Portraits in the Faculty Hall. Mr. Duncan, the Secretary, gave personal recollections as to the sale of Miss Watt's effects.

Allibone (S. A.) 'A Critical Dictionary of English Literature and British and American Authors.' 3 vols. London, 1871. (See entry under Watt's name.)

Mackenzie (Peter), 'Old Reminiscences of Glasgow and the West of Scotland.' 3 vols. London, 1865-68. (See vol. iii. the two last papers, pp. 633-640.)

Mason (Thomas), 'A Bibliographical Martyr.—Dr. Robert Watt, Author of the Bibliotheca Britannica.' (Reprint of paper published in 'The Library,' vol. i. 1889, pp. 56-63.)

Addison (W. Innes), Assistant Clerk to the Senate, University of Glasgow, supplied Watt's matriculation entry, and searched the List of Graduates of Glasgow University.

Dowie (James), Assistant Clerk, Edinburgh University, searched the Lists, and supplied the entry of Watt's name in the University there.

Anderson (P. J.), 'Officers and Graduates of the University and King's College, Aberdeen, MVD-MDCCCLX.' Printed for the New Spalding Club. Aberdeen, 1893.

'Index to the Proceedings of the Philosophical Society of Glasgow. Vols. i. to xx. 1841-89,' Glasgow, 1892. (This contains a List of the Presidents.)

Keddie (William), 'Early History and Proceedings of the Society.' 'Proceedings of the Philosophical Society of Glasgow.' Vol. iv. pp. 101, 117, Glasgow, 1860. (The MS. minutes have also been examined, and extracts supplied to the writer.)

'Memorial Catalogue of the Old Glasgow Exhibition, 1894.' Glasgow, 1896.

Watt's 'Bibliotheca Britannica.' Statements on back of Parts 1 and 2 in the Glasgow Mitchell Library. Notice to subscribers. Preface to completed work. Entry under Watt's name.

Watt's published Books and Papers: also his MSS. (See List in this memoir, with dates and titles in the originals.)

Catalogue of Paisley Free Library, Reference Department, and Watt's MS. preserved there.

Class ticket for Watt's Lectures on 'The Practice of Medicine,' in the possession of the writer, whose grandfather attended the Class in the Summer of 1813. This has Watt's signature which is reproduced on the portrait.

Newspaper cutting (June 1846), with a notice of Mr. Alexander Whitelaw's death; and various letters relating to Mr. Alexander Whitelaw and Miss Watt, in the possession of Mrs. Whitelaw, Rowmore, Row.

MEDICAL BIBLIOGRAPHY AND MEDICAL EDUCATION: DR. ROBERT WATT'S LIBRARY FOR HIS MEDICAL STUDENTS IN 1812.

MEDICAL BIBLIOGRAPHY AND MEDICAL EDUCATION :
DR. ROBERT WATT'S LIBRARY FOR HIS MEDICAL
STUDENTS IN 1812.

By JAMES FINLAYSON, M.D., *Physician to the Glasgow Western Infirmary, and to the Royal Hospital for Sick Children; Honorary Librarian to the Faculty of Physicians and Surgeons Glasgow.*

WHEN I wrote "An Account of the Life and Works of Dr. Robert Watt, Author of the 'Bibliotheca Britannica' (London, 1897)," I stated that I had been unable to find, anywhere, a copy of his medical catalogue.¹ A few months ago I saw this little book bound up with a miscellaneous lot of pamphlets, in the catalogue of a second-hand bookseller in Glasgow, and I secured it at once for the Faculty Library.

The method pursued by the great bibliographer in teaching medicine is worthy of notice, even at the present day. He says:

"The reading of the student is too often confined to systems and to compilations, which are generally the works of men of little experience, or of men writing under the influence of preconceived opinions. By the first, materials of little value are as readily selected as those of real importance; while by the last, only such facts are recorded as go to support a particular theory. To obtain correct views in medicine, it is necessary to have recourse to original authors, to such as write from actual observation, who have seen and treated the diseases they describe.

"Many students, however, are neither possessed of such works, nor have they access to them. To remedy this defect, the present plan of establishing a library is undertaken, and it is hoped that it will meet the approbation of those for whose benefit it is intended."

"In my lectures on the Practice of Medicine, after considering the history and treatment of each disease, I give a list of the best

¹ "Catalogue of Medical Books, for the use of Students attending Lectures, on the Principles and Practice of Medicine, with an Address to Medical Students on the best method of prosecuting their studies, by Robert Watt, M.D., Member of the Faculty of Physicians and Surgeons of Glasgow, Member of the London Medical and Chirurgical Society, etc., and Lecturer on the Principles and Practice of Medicine in Glasgow," 8vo, Glasgow, 1812, pp. 69.

authors who have written on the subject, and I now put it in your power to peruse these authors, to examine their facts and opinions, and to draw your own conclusions" (pp. 5, 6).

He goes on to combat the idea that ancient literature is useless.

"An idea has too generally prevailed, that there is little useful knowledge to be derived except from writers of the present day. . . . After having suffered ourselves to be more or less diverted from the true path of inquiry, by the dreams of enthusiasts and the reveries of system-mongers, we are glad to resume our march in the road which Hippocrates and Sydenham traversed with such signal caution and success. By comparing the practice of the ancients with modern improvements, we shall learn to appreciate justly the value of the latter. By marking the errors into which our predecessors have fallen, we shall be enabled to pursue, more steadily, the right method of research" (p. 7).

Watt's catalogue represents, for its time, an admirable collection of books in all departments of medicine. It consists of fifty-one pages, and contains over a thousand entries. The ancient literature of the Greeks and Arabians is well represented, and Celsus and Cælius Aurelianus, of course, are there too. Paracelsus, van Helmont, Stahl, Hoffmann, de Haen, Boerhaave, Van Swieten, Fabricius, etc., are all there. Works then recent are also entered. Thus we have Baillie's "Morbid Anatomy" (1807), as well as Cullen and Morgagni; the last, as in many other cases, is in an English translation. Books by Glasgow physicians and surgeons, as might be expected, well represented; mention may be made of the two important works of Allan Burns, and the various volumes by his brother, Professor John Burns; Dr. Badham on "Bronchitis" (to use the name he invented¹); Dr. John Riddell on "Fever"; Dr. Richard Millar on the "History of Medicine"; Dr. John Moore's "Medical Sketches"; Cullen's well-known works; and Dr. Watt's own book on "Diabetes" (his book on "Chinough" was not published till later). Peter Lowe's "Chyrurgerie" represented by the 3rd edition (1634). The collection included many volumes of medical journals also. Dr. Watt points out, in a note, that the deficiencies in his list are chiefly as regards books of the last ten or fifteen years, a defect which he was trying to remedy. In addition to the books, he mentions that he had a collection of about 1000 theses, from Edinburgh, Glasgow, and the Continent, which were all available for reference. He further states that "manuscript catalogues, arranged alphabetically according to the author's names and the subjects treated, may be seen in the library, and will be printed as soon as the collection

¹ In the "New English Dictionary," Dr. Murray gives priority in the use of the word "Bronchitis" to P. Frank, 1812, noting Badham's book as 1814; he seems, however, to have overlooked Badham's first edition, which was issued in 1808.

is completed." It has been stated, indeed, that this classification, by authors and subjects, of his own medical library suggested the idea of his great "Bibliotheca Britannica."

Although referring to a somewhat different matter, it may likewise be quoted here, that "Dr. Watt has also made some progress in forming a museum for illustrating the different parts of the animal economy in health and disease"; and he announces that in the meantime, by the kindness of his friend and neighbour, Mr. Allan Burns, he could show from his museum "specimens of many of the most remarkable organic affections."

This method of medical teaching, by the use of a library, does not seem to have been entirely new in Glasgow. When the celebrated Cullen was an apprentice to Mr. Paisley, a Glasgow surgeon, he found the library of his master very useful for himself as it was unusually good; and when Cullen began his distinguished career as a teacher of medicine in Glasgow, he was able to arrange for his pupils having access to this collection of books. Mr. Paisley, as "Bibliothecarius" to the Faculty of Physicians and Surgeons in Glasgow, was no doubt impressed with the value of having direct access to authoritative books, and with his generosity he laid his library open to Cullen's students.

The question arises, Might not modern teachers of medicine do well to imitate Watt's method? No doubt, since Watt's time a great improvement has occurred as regards text-books, which are now produced, at but little cost to the student, by those of high standing and great practical experience; but now, as there is reference to cyclopædic works, to original memoirs, and to special articles in journals, is constantly required for any adequate presentation of certain subjects. Of course, some teachers might say that they present as much of this as is good for the student at the stage of education, and some even bring before the students for their inspection copies of great works which have left their impress on medicine. In such matters, however, just as in clinical work, it is of the utmost importance that a student should learn how to go about these inquiries himself; a little found out for himself, as to the literature or history of a disease, counts for more than a great deal told him by a teacher. By the former method, what is supplied is information; by the latter, the student obtains education.

How seldom has a young practitioner even a remote idea of how to prosecute an inquiry into the literature of any subject in which he may be interested, and how apt he is, through such ignorance, to think his case "unique," or his observation original! No doubt these difficulties might be lessened by some regular demonstrations in a fairly good medical library, in which the practical use of catalogues, indexes, and books of reference could be shown. Such demonstrations, just as clinical demonstrations, would have their value; but personal investigation (carried on, it

may be, in a tentative or blundering manner) is the only way to acquire any real mastery of the situation, either with books or patients.

Professor Osler of Baltimore tells me that, in the case of a senior student, he may give such a subject as Graves's disease, and request him, in two or three weeks, to bring up a very short verbal account of the literature or history of the subject, explaining who Graves was, and where and when he described the affection; and in the same way as regards Basedow. Owing to their proximity to the great medical library in Washington, with its index-catalogue, his students have no doubt certain advantages. The information thus acquired, and communicated, it may be, from one student to another, is apt to be better assimilated than if it came from the professor. The student thus finds his way to original sources of information, and learns much in the process in addition to what he is searching for.

In my own clinics I have not gone so far or so systematically in this direction as Professor Osler, but I have sometimes made a demonstration of the leading books, in various languages, on children's diseases, or physiognomic diagnosis, for example, placing them on the table for personal examination. Occasionally, I have had a student read aloud from the original treatise the description (for example) given by Sydenham of Chorea Sancti Viti; and I have given Hecker's book to a clinical clerk, and asked him to bring up by and by a short verbal report of the differences or relationships of the dance of St. John, the dance of St. Guy, and Sydenham's chorea, when such a case was under his care.

I think, however, it is not often that this can be done in the British schools of medicine. The continual complaint still is, that the student has no time for such work. He is so much lectured that he has not the necessary time to prepare a few minutes' lecture of his own! Professor Osler's students have the enormous advantage that they have no systematic lectures on medicine at all, either from him or any one else; all his teaching is by clinical work, or such methods as those referred to. Why should he lecture systematically, when he has done his best in this way by his printed book on medicine?

In Scotland, our medical professors in the universities were formerly tied down by a hard-and-fast ordinance, so that they had to give a hundred systematic lectures in winter and fifty in summer, whether they thought this wise or not. By the new ordinances they were liberated; but no sooner were they free than they seem to have voluntarily bound themselves with the old shackles, with the result that matters are practically unchanged in this respect. The new ordinances ordain only a time limit (five months and two and a half months) for each entire course, laying down no rule as to the number of lectures. The General Medical Council, on which the Scottish Universities are so ably

represented, went further: after prolonged discussion, some years ago, they recommended that *systematic lectures should not be given oftener than thrice a week*. So far as the Scottish Universities are concerned, this is a dead letter. Till the student's time is liberated, how can he study? How can he work in laboratories, wards, or libraries? How can he learn the business of his life? In point of fact, he has to learn most of it after his graduation.

No doubt lecturing has advantages of a kind. A system under which the student can give back to the professor, at the examination board, not only the special views but the *ipsissima verba* of the professor, as taken down by dictation, may result in a wonderful percentage of passes and a remarkably high standard of marks! Such a method of lecturing, however, is beneath contempt, and its true value would no doubt appear at any really independent examination.

Even when the professor aims at a higher style of lecturing, his selection of subjects, and the aspects of them taken up, afford indications to the student, which he highly appreciates, in view of the examination being conducted by his professor. Passing this examination is but too often the single aim of the student in his work; anything different from the professor's notions is apt to be regarded as useless or worse.

The question here introduced (no doubt somewhat episodical) is one of urgent importance. In other parts of the kingdom, notably in London and the English university schools, the responsible authorities are alive to the necessity of practical work superseding to a large extent the traditional lecturing system. A succession of brilliant teachers, for two or three generations—not yet quite extinct—has blinded the Scottish Universities to the needs of the times and to the revolution wrought by cheap printing. Practical work and instruction in laboratories, wards, and dispensaries are now the really urgent matters which reading, lecturing, or even demonstrations cannot supersede; but with systematic lectures five days a week the time and energy of the student are used up, and the power or even the desire of learning anything beyond what his professor tells him is apt to be lost. In some schools, indeed, it has been reckoned dangerous to know anything else!

Untrammelled by traditions, the Johns Hopkins University has abolished systematic lectures on medicine. Is it too much to ask the Scottish Universities, under their new ordinances, to conform to the recommendations of the General Medical Council, on which they are so fully and so ably represented?



